

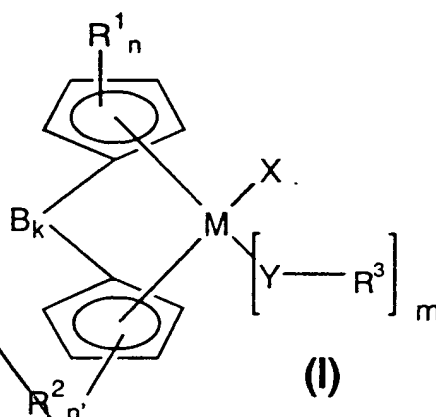
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CLEAN VERSION OF AMENDED CLAIMS

Please cancel claims 1-8. Please enter new claims 9-15

Claims 9-15 should read as follows:

9. (newly added) A compound of the formula (I),



where

M is a metal of transition group III, IV, V or VI of the Periodic Table of the Elements,

R¹ are identical or different and are each a radical Si(R¹²)₃, where R¹² are identical or different and are each a hydrogen atom or a C₁-C₄₀-group or R¹ is a C₁-C₃₀-group, or two or more radicals R¹ may be connected to one another in such a way that the radicals R¹ and the atoms of the cyclopentadienyl ring which connect them form a C₄-C₂₄-ring system which may in turn be substituted,

Sub B1
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A

R^2 are identical or different and are each a radical $Si(R^{12})_3$, where R^{12} are identical or different and are each a hydrogen atom or a C_1-C_{40} -group, or R^2 is a C_1-C_{30} -group, or two or more radicals R^2 may be connected to one another in such a way that the radicals R^2 and the atoms of the cyclopentadienyl ring which connect them form a C_4-C_{24} -ring system which may in turn be substituted,

R^3 are identical or different and are each a C_2-C_{25} -alkenyl, C_3-C_{15} -alkylalkenyl, C_5-C_{24} -heteroaryl, C_7-C_{30} -arylalkyl, C_7-C_{30} -alkylaryl, fluorinated C_1-C_{25} -alkyl, fluorinated C_6-C_{24} -aryl, fluorinated C_7-C_{30} -arylalkyl or fluorinated C_7-C_{30} -alkylaryl,

X is a halogen atom,

Y is an element of main group VI of the Periodic Table of the Elements or a fragment CH_2 , CR^3_2 , NR^3 , PR^3 or $P(=O)R^3$,

n is from 0 to 4,

n' is from 0 to 4,

m is from 1 to 3,

k is 1,

B is a bridging structural element between the two cyclopentadienyl rings and one or both cyclopentadienyl rings are substituted in such a way that they form an indenyl ring.

10.(newly added) A compound as claimed in claim 9, wherein

M is Ti, Zr or Hf,

R¹ are identical or different and are each a radical Si(R¹²)₃, where R¹² are identical or different and are each a hydrogen atom a C₁-C₂₀-alkyl,

C₁-C₁₀-fluoroalkyl, C₁-C₁₀-alkoxy, C₆-C₁₀-aryl, C₆-C₁₀-fluoroaryl,

C₆-C₁₀-aryloxy, C₂-C₁₀-alkenyl,

or R¹ is C₁-C₂₅-alkyl, C₂-C₂₅-alkenyl, C₃-C₁₅-alkylalkenyl, C₆-C₂₄-aryl,

C₅-C₂₄-heteroaryl, C₇-C₃₀-arylalkyl, C₇-C₃₀-alkylaryl, fluorinated C₁-C₂₅-alkyl,

fluorinated C₆-C₂₄-aryl, fluorinated C₇-C₃₀-arylalkyl, fluorinated C₇-C₃₀-

alkylaryl, or C₁-C₁₂-alkoxy, or two or more radicals R¹ may be connected to

one another in such a way that the radicals R¹ and the atoms of the

cyclopentadienyl ring which connect them form a C₄-C₂₄-ring system which

may in turn be substituted,

R² are identical or different and are each a radical Si(R¹²)₃, where R¹² are identical or different and are each a hydrogen atom a C₁-C₂₀-alkyl,

C₁-C₁₀-fluoroalkyl, C₁-C₁₀-alkoxy, C₆-C₁₀-aryl, C₆-C₁₀-fluoroaryl,

C₆-C₁₀-aryoxy, C₂-C₁₀-alkenyl,

or R² is C₁-C₂₅-alkyl, C₂-C₂₅-alkenyl, C₃-C₁₅-alkylalkenyl, C₆-C₂₄-aryl,

C₅-C₂₄-heteroaryl, C₇-C₃₀-arylalkyl, C₇-C₃₀-alkylaryl, fluorinated C₁-C₂₅-alkyl,

fluorinated C₆-C₂₄-aryl, fluorinated C₇-C₃₀-arylalkyl, fluorinated C₇-C₃₀-

alkylaryl, or C₁-C₁₂-alkoxy, or two or more radicals R² may be connected to

one another in such a way that the radicals R² and the atoms of the

cyclopentadienyl ring which connect them form a C_4 - C_{24} -ring system which may in turn be substituted,

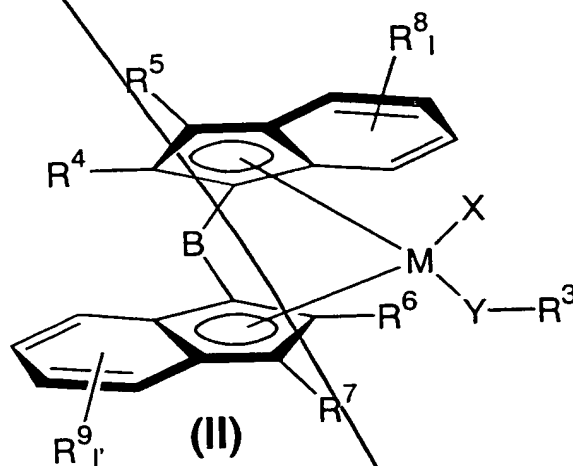
X is chlorine

Y is oxygen, sulfur or N R^3 ,

m is 1 and

one or both cyclopentadienyl rings are substituted in such a way that they form an indenyl ring which is substituted.

11. A compound of the formula (II)



where

M is Ti, Zr or Hf,

R^3 is isopropyl, tert-butyl, cyclohexyl or octyl, a C_5 - C_{24} -heteroaryl, C_7 - C_{30} -arylalkyl, C_7 - C_{30} -alkylaryl, fluorinated C_6 - C_{24} -aryl, fluorinated C_7 - C_{30} -arylalkyl, or fluorinated C_7 - C_{30} -alkylaryl

R^4 , R^6 are identical or different and are each a hydrogen atom or a C_1 - C_{20} -group,

R^5 , R^7 are identical or different and are each a hydrogen atom or a C_1 - C_{20} -group,

R^8 , R^9 are identical or different and are each a hydrogen atom, a halogen atom

Sub P1
cont'd

or a C₁-C₂₀-group, and two radicals R⁸ or R⁹ may form a monocyclic or polycyclic ring system which may in turn be substituted,

X is a halogen atom,

Y is an element of main group VI of the Periodic Table of the Elements or a fragment CH, C R³₂, NR³, PR³ or P(=O)R³,

I, I' are identical or different and are each an integer from zero to 4,

B is a bridging structural element between the two indenyl radicals.

Al

12.(newly added) A compound as claimed in claim 11, wherein, in the formula (II),

M is zirconium,

R⁴, R⁶ are identical or different and are each a hydrogen atom, a C₁-C₁₈-alkyl,

C₂-C₁₀-alkenyl, C₃-C₁₅-alkylalkenyl, C₆-C₁₈-aryl, C₅-C₁₈-heteroaryl, C₇-C₂₀-arylalkyl, C₇-C₂₀-alkylaryl, fluorinated C₁-C₁₂-alkyl, fluorinated C₆-C₁₈-aryl, fluorinated C₇-C₂₀-arylalkyl or fluorinated C₇-C₂₀-alkylaryl,

R⁸, R⁹ are identical or different and are each a hydrogen atom, a halogen atom a linear or branched C₁-C₁₈-alkyl group, C₂-C₂₅-alkenyl, C₃-C₁₅-alkylalkenyl, a C₆-C₁₈-aryl group which may be substituted, C₅-C₁₈-heteroaryl, C₇-C₂₀-arylalkyl, C₇-C₂₀-alkylaryl, fluorinated C₁-C₁₂-alkyl, fluorinated C₆-C₁₈-aryl, fluorinated C₇-C₂₀-arylalkyl or fluorinated C₇-C₂₀-alkylaryl, and two radicals R⁸ or R⁹ may form a monocyclic or polycyclic ring system which in turn may be substituted,

X is chlorine,

Y is oxygen, sulfur or NR³,

BINGEL et al. Serial No. 09/701,658

I, I' are identical or different and are each 1 or 2,

13.(newly added) A catalyst comprising at least one compound as claimed in claim 9
and a support and, optionally, a cocatalyst.

14.(newly added) A process for preparing a polyolefin which comprises polymerizing an
olefinic monomer in the presence of a catalyst as claimed in claim 13.

15(newly added) The use of a catalyst as claimed in claim 13 for olefin polymerization.
